Public Health
Seattle & King County

World TB Day-March 24th 2009

Global issue, local impact

As a closely-linked neighbor of the global community, residents of King County are vulnerable to a disease that infects one third of the world's population and kills nearly two million people every year. The Tuberculosis Control program works to ensure that people with active tuberculosis (TB) disease are diagnosed and treated and their contacts at highest risk of infection screened, so that infections don't spread to others.

The value of local TB Control

Local investments in TB control improve community health and save money by controlling the spread of TB, reducing the opportunity for outbreaks, and helping to prevent the development of multi-drug resistant forms of the disease that cost approximately $250,000 per person to cure.

Unfortunately, a broken public heath funding system is putting TB control activities in King County at risk. Already, the TB Control Program has reduced services to the highest priority cases and contacts. Local public health agencies need a dedicated, long term funding solution so the public can continue to receive critical public health services, like TB Control.

What makes TB a unique illness?

TB is a contagious disease caused by germs spread through the air when a person with active TB disease coughs, sings, laughs, or sneezes. Unique aspects of TB are: [1] there is a dormant phase (latent TB infection), which can last for years; after catching TB germs about 10% of people who are infected with latent TB progress to active TB disease; and [2] without treatment people with active TB disease infect an average of 10 to 15 people every year.

What is the treatment for TB?

TB usually affects the lungs. A person with TB can die if they do not get treatment. Antibiotics can cure TB, yet treatment takes an average of six to nine months to complete and can take 24 months or longer. The majority of people with TB receive directly observed therapy (DOT), which means a trained health care worker watches the person take their medications. No one diagnosed with active TB in King County in 2008 discontinued or refused to complete treatment to date. Of the 119 people who began treatment in 2008 (two cases were diagnosed after the person died), 43 (36%) have completed therapy.

What is drug resistant TB?

TB that is resistant to at least two of the first line TB drugs is called multi-drug resistant TB (MDR-TB). MDR-TB is exceedingly costly and difficult to treat. King County reported three cases of MDR-TB in 2008, with three additional cases of MDR-TB diagnosed in other US health jurisdictions in 2008 and transferred to treatment in King County. In 2008, 10 people (8%) treated for TB were resistant to at least one TB medication.

For more information, please see our website (www.kingcounty.gov/health/tb)
or contact Eyal Oren or Margaret Ragland (Epidemiologists) at 206-744-4579

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Epidemiology of TB in King County

In 2008, King County reported 121 cases of active TB. For every 100,000 residents of King County, 6.5 developed active TB disease in 2008[1]. This case rate is notably higher than the US case rate of 4.2 cases per 100,000 population[2].

Age, race, and ethnicity

The median age of TB cases in 2008 was 41 years. There were nine pediatric cases (age 0-14 years), and six were diagnosed through contact investigations (i.e. family members or caretakers had active TB). Five pediatric cases were born in countries where TB is highly prevalent, and all were diagnosed within one year after emigrating from their counties of birth.

Non-white races continue to have disproportionately high rates of TB. The highest case rates in King County in 2008 were seen among individuals identifying their race as black with a rate of 35.6 cases per 100,000[1]. Black cases born outside the US made up 86% of the black cases in King County in 2008.

The TB case rate in people identifying as Hispanic was 17.7 per 100,000 population[1].

Country of birth

In 2008, 81% of King County TB cases were born outside the US. Of these individuals, 60 (61%) came from five countries: Somalia, Mexico, Ethiopia, the Philippines, and Vietnam.

TB-HIV co-infection

It is important to know the HIV serostatus of every person who has TB in order to provide the necessary complex medical care and to minimize morbidity and mortality. HIV test results were obtained for 88% of cases in King County in 2008. Among this group, eight TB cases were co-infected with HIV representing 8% of TB cases with known HIV serostatus. Nationwide, 60% of TB cases have HIV test results available with 7% infected[1].

Homelessness

There were 13 cases of TB diagnosed among the homeless in King County in 2008. The number of homeless cases has decreased since its peak during the King County homeless outbreak (65 cases from 2002 to 2003). Cases associated with the homeless outbreak are still being seen in King County.

Contact investigations

Contact investigations are conducted for all individuals considered infectious. Over 388 household contacts were screened in 2008 in 58 investigations. In addition, nine worksite, school, or nursing/medical facility investigations were initiated in 2008. There were three additional investigations in congregate settings associated with homeless cases. More than 500 contacts were identified at all sites with over 450 screened.

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[1] 2007 population data; population data from "1990-2007 Population Estimates: Population Estimates for Public Health Assessment, Washington State Department of Health", Vista Partnership, and Krupski Consulting. December 2007.
[2] CDC. Reported Tuberculosis in the United States, 2007. Atlanta, GA: U.S. Department of Health and Human Services, CDC, September 2008.

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